

Substitute for form 1449A/PTO

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(use as many sheets as necessary)

Sheet

1

of

2

Application Number

09/649,569

Filing Date

AUGUST 28, 2000

First Named Inventor

PATEL et al.

Group Art Unit

1746

Examiner Name

Unknown

Attorney Docket Number

P06-US

Complete if Known

~~TC 1700~~

U.S. PATENT DOCUMENTS

[illegible]

FOREIGN PATENT DOCUMENTS

Examiner Initials*	Cite No. ¹	Foreign Patent Document			Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	78
		Office ³	Number ⁴	Kind Code ⁵ (if known)				
And	DA	wo	98/05605		Bhardwaj, J. K.	02-12-1998		
	DB	wo	98/13856		Bhardwaj et al.	04-02-1998		
	DC	wo	99/01887		Lea et al.	01-14-1999		
	DD	wo	99/03313		Lea et al.	01-21-1999		
	DE	wo	99/49506		McQuarrie, A. D.	09-30-1999		
	DF	wo	00/52740		Bhardwaj et al.	08-08-2000		
	DG	EP	0 822 582 A2		Bhardwaj, J. K.	02-04-1998		
	DH	EP	0 822 584 A2		Bhardwaj, J. K.	04-04-1998		
	DI	EP	0 838 839 A2		Bhardwaj, J. K.	04-29-1998		
And	DJ	EP	0 878 824 A2		McQuarrie et al.	11-18-1998		

**Examiner
Signature**

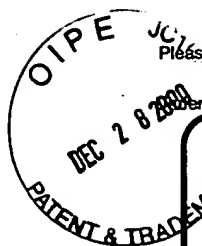
Date _____

Considered

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹ Unique citation designation number. ² See attached Kinds of U.S. Patent Documents. ³ Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ⁴ For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁵ Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. ⁶ Applicant is to place a check mark here if English language Translation is attached.

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, Patent and Trademark Office, Washington, DC 20231. **DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO:** Assistant Commissioner for Patents, Washington, DC 20231.



Please type a plus sign (+) inside this box → ☐ +

H2 2/2

PTO/SB/08B (10-96)
Approved for use through 10/31/99. OMB 0651-0031
Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

+

Substitute for form 1449B/PTO				Complete if Known	
INFORMATION DISCLOSURE STATEMENT BY APPLICANT (use as many sheets as necessary)				Application Number	09/649,569
				Filing Date	AUGUST 28, 2000
				First Named Inventor	PATEL et al.
				Group Art Unit	1746
				Examiner Name	Unknown
Sheet	2	of	2	Attorney Docket Number	P06-US

RECEIVED
JAN 10 2001
TC 1700

OTHER PRIOR ART – NON PATENT LITERATURE DOCUMENTS			
Examiner Initials ²	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T ²
Handwritten initials	EA	STRELLER et al., "Selectivity in Dry Etching of Si(100) and XeF2 and VUV Light", Elsevier Science B.V., Applied Surface Science, (1996), 106: pp. 341-346	
	EB	VUGTS et al., "Si/XeF2 Etching: Temperature Dependence", J. Vac. Sci. Technol. A 14(5), (Sep/Oct 1996), pp. 2766-2774	
	EC	WANG et al., "Gas-Phase Silicon Etching with Bromine Trifluoride", Transducers '97, 1997 International Conference on Solid-State Sensors and Actuators, Chicago (June 16-19), pp. 1505-1508	
	ED	WINTERS, H.F., "Etch Products from the Reaction of XeF2 with SiO2, SiO3, Si3N4, SiC, and Si in the Presence of Ion Bombardment", J. Vac. Science Technology B 1(4), (Oct-Dec 1983), pp. 927-931	
	EE	WINTERS et al., "The Etching of Silicon with XeF2 Vapor", Appl. Phys. Lett. 34(1), January 1, 1979, pp. 70-73.	
	EF	GILDEMEISTER, J.M., "Xenon Difluoride Etching System", (Nov 17, 1997)	
	EG	"Xenon Difluoride Isotropic Etch System", Seeing is Believing, Surface Technology Systems Ltd. brochure, Newport, UK (date unknown)	
Handwritten initials	EH	Assorted promotional literature, Surface Technology Systems Ltd., Newport, UK (July 28, 1999)	

Examiner Signature		Date Considered	12/12/02
--------------------	--	-----------------	----------

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹ Unique citation designation number. ² Applicant is to place a check mark here if English language Translation is attached.

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.

+

Please type a plus sign (+) inside this box → ☐

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

PTO/SB/08B (10-96)

Approved for use through 10/31/99. OMB 0651-0031
Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

Substitute for form 1449B/PTO

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(use as many sheets as necessary)

Sheet

2

of

2

Complete if Known

Application Number 09/649,569

Filing Date AUGUST 28, 2000

First Named Inventor PATEL et al.

Group Art Unit 1746

Examiner Name Unknown

Attorney Docket Number P06-US

OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS

Examiner Initials ¹	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T ²
fluo	BA	ALIEV et al., "Development of Si(100) Surface Roughness at the Initial Stage of Etching in F2 and XeF2 Gases Ellipsometric Study", Surface Science 442 (1999), pp. 206-214.	
	BB	HABUKA et al., "Dominant Overall Chemical Reaction in a Chlorine Trifluoride-Silicon-Nitrogen System at Atmospheric Pressure", Japan Journal of Applied Physics Vol 38 (1999), pp. 6466-6469.	
	BC	HECHT et al., "A Novel X-ray Photoelectron Spectroscopy Study of the Al/SiO2 Interface", J. Appl. Phys. 57 (1: 15 June 1985, pp. 5256-5261.	
	BD	HOULE, F.A., "Dynamics of SiF4 Desorption During Etching of Silicon by XeF2", IBM Almaden Research Center, 15 April 1987, pp. 1866-1872.	
	BE	FLAMM et al., "XeF2 and F-Atom Reactions with Si: Their Significance for Plasma Etching", Solid State Technol. 26, 117 (1983).	
	BF	IBBOTSON et al., "Plasmaless Dry Etching of Silicon with Fluorine-containing Compounds", Journal of Applied Physics, vol. 56, no. 10, Nov. 1984, pp. 2939-2942.	
	BG	IBBOTSON et al., "Comparison of XeF2 and F-atom Reactions with Si and SiO2", Applied Physics Letter, vol. 44, 1129 (1984).	
	BH	WINTERS et al., "The Etching of Silicon with XeF2 Vapor", Applied Physics Letters, vol. 34, no. 1, 1979 pp. 70-73.	
	BI	XACTIX, Inc., Marketing Brochure, June 27, 1999	
fluo	BJ	WANG et al., "Gas-Phase Silicon Etching with Bromine Trifluoride", TRANSDUCERS '97, International Conference on Solid-State Sensor and Actuators, Chicago, June 16-19, 1997, pp. 1505-1508.	

Examiner
Signature

fluo

Date

Considered

12/12/02

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹ Unique citation designation number. ² Applicant is to place a check mark here if English language Translation is attached.

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.



#4 1/3

RECEIVED
NOV 4 2002
TC 400

PTO/SB/08A (10-01)

Approved for use through 10/31/2002. OMB 0651-0031

U.S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449A/PTO INFORMATION DISCLOSURE STATEMENT BY APPLICANT (use as many sheets as necessary)		Complete if Known	
		Application Number	09/649,569
		Filing Date	AUGUST 28, 2000
		First Named Inventor	PATEL et al.
		Art Unit	1746 1763
Examiner Name	PURNELL, A.		
Attorney Docket Number	P06-US		
Sheet	1	of	3

U.S. PATENT DOCUMENTS					
Examiner Initials ¹	Cite No. ¹	Document Number	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number - Kind Code ² (if known)			
Huo	FA	US- 3,511,727	05-12-1970	Hays, R.G.	
	FB	US- 4,695,700	09-22-1987	Provence et al.	
	FC	US- 4,749,440	06-07-1988	Blackwood et al.	
	FD	US- 5,206,471	04-27-1993	Smith, D.K.	
	FE	US- 5,439,553	08-08-1995	Grant et al.	
	FF	US- 5,534,107	07-09-1996	Gray et al.	
	FG	US- 5,716,495	02-10-1998	Butterbaugh et al.	
	FH	US- 5,726,480	03-10-1998	Pister, K.S.	
	FI	US- 5,757,456	05-26-1998	Yamazaki et al.	
	FJ	US- 5,858,065	01-12-1999	Li et al.	
	FK	US- 6,022,456	02-08-2000	Manning, T.J.	
	FL	US- 6,162,367	12-19-2000	Tai et al.	
	FM	US- 6,277,173 B1	08-21-2001	Sadakata et al.	
	FN	US- 6,290,864 B1	09-18-2001	Patel et al.	
	FO	US- 6,328,801 B1	12-11-2001	Gary et al.	
Huo	FP	US- 6,334,928 B1	01-01-2002	Sekine et al.	
	FQ	US- 6,355,181 B1	03-12-2002	McQuarrie, A.D.	
	FR	US- 2001/0002663 A1	06-07-2001	Tai et al.	
	FS	US- 2002/0033229 A1	03-21-2002	Lebouitz et al.	
		US-			

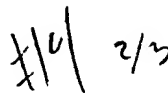
FOREIGN PATENT DOCUMENTS							
Examiner Initials ¹	Cite No. ¹	Foreign Patent Document		Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T ⁶
		Country Code ³	-Number ⁴ - Kind Code ⁵ (if known)				
Huo	GA	EP-0704884-A2		04-03-1996	Mehta, J.		
	GB	EP-0878824-A2	DUPLICATE	11-18-1998	McQuarrie et al.		
	GC	EP-0878824-A3		01-19-2000	McQuarrie et al.		
	GD	EP-0955668-A2		11-10-1999	Yao et al.		
	GE	JP-1982/57098679-A		06-18-1982	Tsunetoshi, A.		
	GF	JP-1983/58130529-A		08-04-1983	Yoshihiro et al.		
	GG	JP-1985/60057938-A		04-03-1985	Katsumi et al.		
	GH	JP-1986/61053732-A		03-17-1986	Arata et al.		
	GI	JP-1986/61134019-A		06-21-1986	Shinji et al.		
	GJ	JP-1986/61181131-A		08-13-1986	Shinji et al.		

Examiner Signature	<i>Alan Olan</i>	Date Considered	12/12/02
--------------------	------------------	-----------------	----------

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹ Applicant's unique citation designation number (optional). ² See Kinds Codes of USPTO Patent Documents at www.uspto.gov or MPEP 901.04. ³ Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ⁴ For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁵ Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. ⁶ Applicant is to place a check mark here if English language Translation is attached.

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.



NOV 4 2002
RECEIVED
TC 100
TO/SEA (10-01)
02. OMB 05-1-0031
NT OF COMMERCE
contains a valid OMB


Approved for use through 10/31/2002. OMB 0541-0031

U.S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

[illegible]

FOREIGN PATENT DOCUMENTS						
Examiner Initials*	Cite No. 1	Foreign Patent Document	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T
		Country Code 3 -Number ⁴ . Kind Code ⁵ (if known)				
JFK	GK	JP-1986/61187238-A	08-20-1986	Nobuo et al.		
	GL	JP-1986/61270830-A	12-01-1986	Toru. T.		
	GM	JP-1987/62071217-A	04-01-1987	Toru et al.		
	GN	JP-1988/63155713-A	06-28-1988	Tadashi, F.		
	GO	JP-1989/01208834-A	08-22-1989	Nobuo et al.		
	GP	JP-1989/01217921-A	08-31-1989	Tsuneo et al.		
	GQ	JP-1990/02250323-A	10-08-1990	Susumu et al.		
	GR	JP-1991/03012921-A	01-21-1991	Nobuo et al.		
	GS	JP-1992/04096222-A	03-27-1992	Atsuyuki, A.		
AKO	GT	JP-1995/07029823-A	01-31-1995	Hiroshi, T.		

Examiner Signature		Date Considered	12/14/02
-----------------------	---	--------------------	----------

*EXAMINER: Initial reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

1 Applicant's unique citation designation number (optional). ² See Kinds Codes of USPTO Patent Documents at www.uspto.gov or MPEP 901.04. ³ Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ⁴ For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁵ Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. ⁶ Applicant is to place a check mark here if English language Translation is attached.

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, Washington, DC 20231. **DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO:** Assistant Commissioner for Patents, Washington, DC 20231.

44 313

RECEIVED

NOV 4

TC

(S/B/OBA-70-01)
OMB 0651-0031
T OF COMMERCE
ains a valid OMB

PTO/SB/08A-10-011

Approved for use through 10/31/2002. OMB 0651-0031

U.S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449A/PTO				<div>Complete if Known</div> <table border="1"> <tr> <td>Application Number</td> <td>09/649.569</td> </tr> <tr> <td>Filing Date</td> <td>AUGUST 28. 2000</td> </tr> <tr> <td>First Named Inventor</td> <td>PATEL et al.</td> </tr> <tr> <td>Art Unit</td> <td>1740 1763</td> </tr> <tr> <td>Examiner Name</td> <td>PURNELL, A.</td> </tr> <tr> <td>Attorney Docket Number</td> <td>P06-US</td> </tr> </table>		Application Number	09/649.569	Filing Date	AUGUST 28. 2000	First Named Inventor	PATEL et al.	Art Unit	1740 1763	Examiner Name	PURNELL, A.	Attorney Docket Number	P06-US
Application Number	09/649.569																
Filing Date	AUGUST 28. 2000																
First Named Inventor	PATEL et al.																
Art Unit	1740 1763																
Examiner Name	PURNELL, A.																
Attorney Docket Number	P06-US																
INFORMATION DISCLOSURE STATEMENT BY APPLICANT <i>(use as many sheets as necessary)</i>																	
Sheet	3	of	3														

[illegible][illegible]

Examiner Signature		Date Considered	12/12/02
-----------------------	---	--------------------	----------

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹ Applicant's unique citation designation number (optional). ² See Kinds Codes of USPTO Patent Documents at www.uspto.gov or MPEP 901.04. ³ Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ⁴ For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁵ Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. ⁶ Applicant is to place a check mark here if English language Translation is attached.

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, Washington, DC 20231. **DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO:** Assistant Commissioner for Patents, Washington, DC 20231.